From: Rich Murray <rmforall@gmail.com>
Sent: Wednesday, January 22, 2014 1:43 AM
To: Rich Murray
Subject: research on aspartame (methanol, formaldehyde, formic acid) toxicity: Rich Murray 2004.07.11 2014.01.21

research on aspartame (methanol, formaldehyde, formic acid) toxicity: Rich Murray 2004.07.11 2014.01.21
http://rmforall.blogspot.com/2014/01/research-on-aspartame-methanol.html
http://groups.yahoo.com/group/aspartameNM/message/1806
http://groups.yahoo.com/group/aspartameNM/message/1100

Rich Murray, MA Room For All rmforall@gmail.com
(b) (6) (b) (6)

[NutraSweet, Equal, Canderel, Benevia, E951]

http://groups.yahoo.com/group/aspartameNM/message/927
Donald Rumsfeld, 1977 head of Searle Corp., got aspartame FDA approval:
Turner: Murray 2002.12.23 rmforall

A very detailed, highly credible account of the dubious approval process for aspartame in July, 1981 is part of the just released two-hour documentary "Sweet Misery, A Poisoned World: An Industry Case Study of a Food Supply In Crisis" by Cori Brackett: cori@soundandfuryproductions.com
http://www.soundandfuryproductions.com/ 520-624-9710
2301 East Broadway, Suite 111 Tucson, AZ 85719

http://groups.yahoo.com/group/aspartameNM/message/1039
three-page review: aspartame (methanol, formaldehyde) toxicity:
Murray 2003.11.22 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1026
brief aspartame review: formaldehyde toxicity: Murray 2003.09.11 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1025
aspartame & formaldehyde toxicity: Murray 2003.09.09 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1094
the 11% methanol component of aspartame becomes formaldehyde, now ruled a carcinogen by WHO International Agency for Research on Cancer: Murray 2004.06.16 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1084
26 stevia safety abstracts since 1993: aspartame vs stevia debate on alt.support.diabetes, George Schmidt, OD: Murray 2004.05.25 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1088
Murray, full plain text & critique:
chronic aspartame in rats affects memory, brain cholinergic receptors, and brain chemistry, Christian B, McConnaughey M et al, 2004 May:
2004.06.05 rmforall

Pharmacol Biochem Behav. 2004 May; 78(1): 121-7.
Chronic aspartame affects T-maze performance, brain cholinergic receptors and Na(+),K(+)-ATPase in rats.
Christian B, McConnaughey K, Bethea E, Brantley S, Coffey A, Hammond L, Harrell S, Metcalf K, Muehlenbein D, Spruill W, Brinson L, McConnaughey M.
Department of Pharmacology, Brody School of Medicine, East Carolina University, Greenville, NC 27858, USA;
North Carolina School of Science and Mathematics, Durham, NC 27811.
http://www.ecu.edu/pharmacology/faculty/mcconnaughey.html
Mona M. McConnaughey, Ph.D. Research Assistant Professor
Department: PHARMACOLOGY & TOXICOLOGY
Office: Brody Medical Science 6E-120A 252-744-2756
MCCONNAUGHEYM@mail.ecu.edu

This study demonstrated that chronic aspartame consumption in rats can lead to altered T-maze performance and increased muscarinic cholinergic receptor densities in certain brain regions.
Control and treated rats were trained in a T-maze to a particular side and then periodically tested to see how well they retained the learned response.
Rats that had received aspartame (250 mg/kg/day) in the drinking water for 3 or 4 months showed a significant increase in time to reach the reward in the T-maze, suggesting a possible effect on memory due to the artificial sweetener.
Using [(3)H]quinuclidinyl benzilate (QNB) (1 nM) to label muscarinic cholinergic receptors and atropine (10(-6) M) to determine nonspecific binding in whole-brain preparations,
aspartame-treated rats showed a 31% increase in receptor numbers when compared to controls.
In aspartame-treated rats, there was a significant increase in muscarinic receptor densities in the
frontal cortex, midcortex, posterior cortex, hippocampus, hypothalamus and cerebellum of 80%, 60%, 61%, 65%, 66% and 60%, respectively.
The midbrain was the only area where preparations from aspartame-treated rats showed a significant increase in Na(+),K(+)-ATPase activity.
It can be concluded from these data that long-term consumption of aspartame can affect T-maze performance in rats and alter receptor densities or enzymes in brain. PMID: 15159141

A Searle Laboratories team in 1976 reported that in 4 monkeys fed aspartame, by 12 hours: "...the major fraction (70%) of the [aspartate] label appeared in the expired air (Fig.6)...Urinary and fecal 14C [aspartate derived] amounted to 4--6% of the administered [aspartate] label."

This gives a total of a maximum 76% excreted aspartate from the aspartame, indicating that 24% of this excitotoxin was retained in the body. It is

reasonable to conclude that daily use of aspartame must lead to substantial accumulation of this excitotoxin, aspartate, in body tissues.

Their 1979 review said: "Aspartame... is hydrolyzed in the gut to yield aspartic acid, phenylalanine, and methanol....
Aspartate may also be incorporated into body constitutents such as other amino acids, proteins, pyrimidines, asparagine, and N-acetylaspartic acid."

[Rich Murray 2014.01.21: this research didn't use methanol-14C, so it couldn't trace the resulting retained formaldehyde...]

J Environ Pathol Toxicol. 1979 Mar-Apr; 2(4): 979-85.
A review of the metabolism of the aspartyl moiety of aspartame in experimental animals and man.
Ranney RE, Oppermann JA.
Department of Drug Metabolism and Radiochemistry, Searle Laboratories, Skokie, Illinois. Division of G.D. Searle and Co. Box 5110, Chicago, IL 60680

Aspartame (3-amino-N-(alpha-carboxyphenethyl) succinamic acid, methyl ester; the methyl ester of aspartylphenylalanine, SC-18862) is hydrolyzed in the gut to yield aspartic acid, phenylalanine, and methanol.
This review of the literature describes the metabolic paths followed by aspartate in its conversion to CO2 or its incorporation into body constituents.
About 70 percent of 14C from [asp-14C]-aspartame is converted in the monkey to 14CO2.
Some of the aspartate is converted at the intestinal mucosal level to alanine by decarboxylation.
This amino acid may be oxidized to CO2 by entering the tricarboxylic acid cycle via pyruvate and acetyl CoA.
In addition, transamination of aspartate to oxaloacetate permits this product also to enter the tricarboxylic acid cycle.
Aspartate may also be incorporated into body constitutents such as other amino acids, proteins, pyrimidines, asparagine, and N-acetylaspartic acid.
It is concluded that the aspartate moiety of aspartame is metabolized in a manner similar to that of dietary aspartic acid.
Publication Types: Review PMID: 376770

http://groups.yahoo.com/group/aspartameNM/message/1067
eyelid contact dermatitis by formaldehyde from aspartame, AM Hill & DV Belsito, Nov 2003: Murray 2004.03.30 rmforall [150 KB]

http://groups.yahoo.com/group/aspartameNM/messages
122 members, 1,100 posts in a public searchable archive

http://groups.yahoo.com/group/aspartame/messages
823 members, 17,082 posts in a public, searchable archive

It is certain that high levels of aspartame use, above 2 liters daily for months and years, must lead to chronic formaldehyde-formic acid toxicity.

Fully 11% of aspartame is methanol-- 1,120 mg aspartame in 2 L diet soda, almost six 12-oz cans, gives 123 mg methanol (wood alcohol).
The methanol is immediately released into the body after drinking-- unlike the large levels of methanol locked up in complex molecules inside many fruits and vegetables.
Within hours, the liver turns much of the methanol into formaldehyde, and then much of that into formic acid, both of which in time are partially eliminated as carbon dioxide and water.

However, about 30% of the methanol remains in the body as cumulative durable toxic metabolites of formaldehyde and formic acid-- 37 mg daily, a gram every month, accumulating in and affecting every tissue.

If only 10% of the methanol is retained daily as formaldehyde, that would give 12 mg daily formaldehyde accumulation-- about 60 times more than the 0.2 mg from 10% retention of the 2 mg EPA daily limit for formaldehyde in drinking water.

Bear in mind that the EPA limit for formaldehyde in drinking water is 1 ppm, or 2 mg daily for a typical daily consumption of 2 L of water.

http://groups.yahoo.com/group/aspartameNM/message/835
ATSDR: EPA limit 1 ppm formaldehyde in drinking water July 1999:
Murray 2002.05.30 rmforall

This long-term low-level chronic toxic exposure leads to typical patterns of increasingly severe complex symptoms, starting with headache, fatigue, joint pain, irritability, memory loss, rashes, and leading to vision and eye problems, and even seizures. In many cases there is addiction. Probably there are immune system disorders, with a hypersensitivity to these toxins and other chemicals.

J. Nutrition 1973 Oct; 103(10): 1454-1459.
Metabolism of aspartame in monkeys.
Oppermann JA, Muldoon E, Ranney RE.
Dept. of Biochemistry, Searle Laboratories,
Division of G.D. Searle and Co. Box 5110, Chicago, IL 60680
They found that about 70% of the radioactive methanol in aspartame put into the stomachs of 3 to 7 kg monkeys was eliminated within 8 hours, with little additional elimination, as carbon dioxide in exhaled air and as water in the urine.
They did not mention that this meant that about 30% of the methanol must transform into formaldehyde and then into formic acid, both of which must remain as toxic products in all parts of the body.
They did not report any studies on the distribution of radioactivity in body tissues, except that blood plasma proteins after 4 days held 4% of the initial methanol.
This study did not monitor long-term use of aspartame.

The low oral dose of aspartame and for methanol was 0.068 mmol/kg, about 1

part per million [ppm] of the acute toxicity level of 2,000 mg/kg, 67,000 mmol/kg, used by McMartin (1979).
Two L daily use of diet soda provides 123 mg methanol, 2 mg/kg for a 60 kg person, a dose of 67 mmole/kg, a thousand times more than the dose in this study.
By eight hours excretion of the dose in air and urine had leveled off at 67.1 +-2.1% as CO2 in the exhaled air and 1.57+-0.32% in the urine, so 68.7 % was excreted, and 31.3% was retained.
This data is the average of 4 monkeys.
"...the 14C in the feces was negligible."

"That fraction not so excreted (about 31%) was converted to body constituents through the one-carbon metabolic pool."
"All radioactivity measurements were counted to +-1% accuracy..."
This indicates that the results could not be claimed to have a precision of a tenth of a percent. OK, so this is a nit-pick-- but I believe espousing spurious accuracy is a sign of scientific insecurity.

The abstract ends, "It was concluded that aspartame was digested to its three constituents that were then absorbed as natural constituents of the diet."
Thus, the concept is very subtly insinuated that methanol, as a constituent of aspartame, is absorbed as a natural constituent of the diet.
"Dietary methanol is derived in large part from fresh fruits and vegetables."
This is a serious error, since the large amounts of methanol in fresh fruits and vegetables are not readily released by human digestion. (Monte WC, 1984)
Nowhere in this report are mentioned the dread words, "formaldehyde" and "formic acid".

Of course, methanol and formaldehyde toxicity studies are highly relevant to the issue of aspartame toxicity. [Aspartame has to be turned into its toxic products, formaldehyde and formic acid, in the body, before it is toxic, so some pro-aspartame reseach studies test aspartame outside the body, and then proclaim that they have proved that it is not toxic.]

http://groups.yahoo.com/group/aspartameNM/message/915
formaldehyde toxicity: Thrasher & Kilburn: Shaham: EPA: Gold: Wilson: CIIN: Murray 2002.12.12 rmforall

Thrasher (2001): "The major difference is that the Japanese demonstrated the incorporation of FA and its metabolites into the placenta and fetus. The quantity of radioactivity remaining in maternal and fetal tissues at 48 hours was 26.9% of the administered dose." [Ref. 14-16]

Arch Environ Health 2001 Jul-Aug; 56(4): 300-11.
Embryo toxicity and teratogenicity of formaldehyde. [100 references]
Thrasher JD, Kilburn KH. toxicology@drthrasher.org
Sam-1 Trust, Alto, New Mexico, USA.
http://www.drthrasher.org/formaldehyde_embryo_toxicity.html full text

http://www.drthrasher.org/formaldehyde_1990.html full text Jack Dwayne Thrasher, Alan Broughton, Roberta Madison. Immune activation and autoantibodies in humans with long-term inhalation exposure to formaldehyde. Archives of Environmental Health. 1990; 45: 217-223. "Immune activation, autoantibodies, and anti-HCHO-HSA antibodies are associated with long-term formaldehyde inhalation." PMID: 2400243

Confirming evidence and a general theory are given by Pall (2002):
http://groups.yahoo.com/group/aspartameNM/message/909
testable theory of MCS type diseases, vicious cycle of nitric oxide & peroxynitrite: MSG: formaldehyde-methanol-aspartame:
Martin L. Pall: Murray: 2002.12.09 rmforall

Environ Health Perspect. 2003 Sep; 111(12): 1461-4.
Elevated nitric oxide/peroxynitrite theory of multiple chemical sensitivity: central role of N-methyl-D-aspartate receptors in the sensitivity mechanism.
Pall ML.
School of Molecular Biosciences, 301 Abelson Hall, Washington State University, Pullman, WA 99164, USA. martin_pall@wsu.edu

The elevated nitric oxide/peroxynitrite and the neural sensitization theories of multiple chemical sensitivity (MCS) are extended here to propose a central mechanism for the exquisite sensitivity to organic solvents apparently induced by previous chemical exposure in MCS.
This mechanism is centered on the activation of N-methyl-D-aspartate (NMDA) receptors by organic solvents producing elevated nitric oxide and peroxynitrite, leading in turn to increased stimulating of and hypersensitivity of NMDA receptors.
In this way, organic solvent exposure may produce progressive sensitivity to organic solvents.
Pesticides such as organophosphates and carbamates may act via muscarinic stimulation to produce a similar biochemical and sensitivity response.
Accessory mechanisms of sensitivity may involve both increased blood-brain barrier permeability, induced by peroxynitrite, and cytochrome P450 inhibition by nitric oxide.
The NMDA hyperactivity/hypersensitivity and excessive nitric oxide/peroxynitrite view of MCS provides answers to many of the most puzzling aspects of MCS while building on previous studies and views of this condition. PMID: 12948884

Prof. Pall describes processes by which an initial trigger exposure, such as carbon monoxide or formaldehyde, can generate hypersensitivity to many substances. He himself had recovered from a sudden, debilitating attack of multiple chemical sensitivity in June/July 1997.

http://groups.yahoo.com/group/aspartameNM/message/1055
hormesis: possible benefits of low-level aspartame (methanol, formaldehyde) use: Calabrese: Soffritti: Murray 2004.03.11 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1056

disorders of NMDA glutamate receptors in brain range from high activity
(MCS, CF, PTSD, FM, from carbon monoxide or formaldehyde (methanol,
aspartame)-- Pall)
to low activity (schizophrenia-- Coyle, Goff, Javitts):
Murray 2004.03.13 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1090
aspartame, MSG, excitotoxins, NMDA glutamate receptors, multiple sclerosis:
Blaylock: Martini: Murray 2004.06.09 rmforall

http://groups.yahoo.com/group/aspartameNM/message/97
Lancet website aspartame letter 1999.07.29:
Excitotoxins 1999 Part 1/3 Blaylock: Murray 2000.01.14 rmforall
The Medical Sentinel Journal 1999 Fall; (95 references)
http://www.dorway.com/blayenn.html

http://groups.yahoo.com/group/aspartameNM/message/946
Functional Therapeutics in Neurodegenerative Disease Part 1/2:
Perlmutter 1999.07.15: Murray 2003.01.10 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1034
Brain cell damage from amino acid isolates (aspartame releases
phenylalanine, aspartate, methanol [formaldehyde, formic acid] Bowen &
Evangelista May 6 2002: Murray 2003.11.10 rmforall

http://www.aspartame.ca/Brain%20Cell%20Damage.pdf
Brain cell damage from amino acid isolates 5.6.2 41 references
detailed 22 page review by James D. Bowen, MD and Arthur M. Evangelista,
former FDA Investigator orwilly@msn.com

http://groups.yahoo.com/group/aspartameNM/message/628
Professional House Doctors: Singer: EPA: CPSC:
formaldehyde toxicity: Murray 2001.06.10 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1099
Diagnose-Me.com: formaldehyde from 11 % methanol part of aspartame:
recent abstracts for methanol and hangovers: Murray 2004.07.10 rmforall

Since no adaquate data has ever been published on the exact disposition of
toxic metabolites in specific tissues in humans of the 11 % methanol
component of aspartame, the many studies on morning-after hangover from the
methanol impurity in alcohol drinks are the main available resource to date.

This study by Jones AW (1987) found next-morning hangover from red wine with
100 to 150 mg methanol (9.5% w/v ethanol, 100 mg/l methanol, 0.01%).
Fully 11% of aspartame is methanol-- 1,120 mg aspartame in 2 L diet soda,
almost six 12-oz cans, gives 123 mg methanol (wood alcohol).

Pharmacol Toxicol. 1987 Mar; 60(3): 217-20.
Elimination half-life of methanol during hangover.
Jones AW.

Department of Forensic Toxicology, University Hospital, SE-581 85 Linkoping, Sweden. wayne.jones@RMV.se

This paper reports the elimination half-life of methanol in human volunteers. Experiments were made during the morning after the subjects had consumed 1000-1500 ml red wine (9.5% w/v ethanol, 100 mg/l methanol) the previous evening. [100 to 150 mg methanol]
The washout of methanol from the body coincided with the onset of hangover. The concentrations of ethanol and methanol in blood were determined indirectly by analysis of end-expired alveolar air.
In the morning when blood-ethanol dropped below the Km of liver alcohol dehydrogenase (ADH) of about 100 mg/l (2.2 mM), the disappearance half-life of ethanol was 21, 22, 18 and 15 min. in 4 test subjects respectively.
The corresponding elimination half-lives of methanol were 213, 110, 133 and 142 min. in these same individuals.
The experimental design outlined in this paper can be used to obtain useful data on elimination kinetics of methanol in human volunteers without undue ethical limitations.
Circumstantial evidence is presented to link methanol or its toxic metabolic products, formaldehyde and formic acid, with the pathogenesis of hangover.
PMID: 3588516

http://groups.yahoo.com/group/aspartameNM/message/1047
Avoiding Hangover Hell 2003.12.31 Mark Sherman, AP writer:
Robert Swift, MD [formaldehyde from methanol in aspartame]:
Murray 2004.01.16 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1048
hangovers from formaldehyde from methanol (aspartame?):
Schwarcz: Linsley: Murray 2004.01.18

http://groups.yahoo.com/group/aspartameNM/message/1052
DMDC: Dimethyl dicarbonate 200mg/L in drinks adds methanol 98 mg/L (becomes formaldehyde in body): EU Scientific Committee on Foods 2001.07.12: Murray 2004.01.22 rmforall

http://groups.yahoo.com/group/aspartameNM/message/782
RTM: Smith, Terpening, Schmidt, Gums:
full text: aspartame, MSG, fibromyalgia 2002.01.17 rmforall
Jerry D Smith, Chris M Terpening, Siegfried OF Schmidt, and John G Gums
Relief of Fibromyalgia Symptoms Following
Discontinuation of Dietary Excitotoxins.
The Annals of Pharmacotherapy 2001; 35(6): 702-706.
Malcolm Randall Veterans Affairs Medical Center, Gainesville, FL, USA.
BACKGROUND: Fibromyalgia is a common rheumatologic disorder that is often difficult to treat effectively.
CASE SUMMARY: Four patients diagnosed with fibromyalgia syndrome for two to 17 years are described.
All had undergone multiple treatment
modalities with limited success. All had complete, or nearly complete, resolution of their symptoms within months after eliminating monosodium

glutamate (MSG) or MSG plus aspartame from their diet.
All patients were women with multiple comorbidities
prior to elimination of MSG.
All have had recurrence of symptoms whenever MSG is ingested.

Siegfried O. Schmidt, MD Asst. Clinical Prof. siggy@shands.ufl.edu
Community Health and Family Medicine, U. Florida, Gainesville, FL
Shands Hospital West Oak Clinic Gainesville, FL 32608-3629
352-376-5071

http://www.perque.com/ info@perque.com 800-525-7372
http://www.perque.org/Fibromyalgia.pdf
A Novel Treatment for Fibromyalgia Imrpoves Clinical Outcomes in a Community-Based Study.
Patricia A. Deuster, Russell M. Jaffe. RJaffe@perque.com
Journal of Musculoskeletal Pain. 1998; Vol. 6(2): 133-149.

Using blood tests, the researchers ran a panel of 350 antigens including environmental chemicals, food additives and preservatives, crustaceans, diary products, fish, fruits, grains, meats, mollusks, and oils.

Normal, healthy people react to only two or less of this panel. The greatest offenders were:

MSG 42.5 % (17 out of 40 patients)
Candida albicans 37.5
Caffeine 37
Chocolate/cocoa 37
Food colorings 37
Cola beverages 37
Cow Dairy Products 25
Sulfite/metabisulfite 22.5
Xylene 22.5
Yogurt 22.5
Aspartame 20
BHA 20
Cadmium 20
Lead 20
Tylenol 20
Yeast 20
Sodium benzoate 20
Orange 20

C. Trocho (1998):
"In all, the rats retained, 6 hours after administration, about 5% of the label, half of it in the liver."

They used a very low level of aspartame ingestion, 10 mg/kg, for rats, which have a much greater tolerance for aspartame than humans.
So, the corresponding level for humans would be about 1 or 2 mg/kg.
Many headache studies in humans used doses of about 30 mg/kg daily.

http://groups.yahoo.com/group/aspartameNM/message/925
aspartame puts formaldehyde adducts into tissues, Part 1/2
full text, Trocho & Alemany 1998.06.26: Murray 2002.12.22 rmforall

http://ww.presidiotex.com/barcelona/index.html full text
Formaldehyde derived from dietary aspartame binds to tissue components in vivo.
Life Sci June 26 1998; 63(5): 337-49.
Departament de Bioquimica i Biologia Molecular,
Facultat de Biologia, Universitat de Barcelona, Spain.
http://www.bq.ub.es/cindex.html Línies de Recerca: Toxicitat de l'aspartame http://www.bq.ub.es/grupno/grup-no.html
Sra. Carme Trocho, Sra. Rosario Pardo, Dra. Immaculada Rafecas, Sr. Jordi Virgili, Dr. Xavier Remesar, Dr. Jose Antonio Fernandez-Lopez, Dr. Marià Alemany [male]
Fac. Biologia Tel.: (93)4021521, FAX: (93)4021559
Sra. Carme Trocho "Trok-ho" Fac. Biologia Tel.: (93)4021544, FAX: (93)4021559
alemany@porthos.bio.ub.es ; bioq@sun.bq.ub.es

Abstract:
Adult male rats were given an oral dose of 10 mg/kg aspartame, 14C-labeled in the methanol carbon.
At timed intervals of up to 6 hours, the radioactivity in plasma and several organs was investigated.
Most of the radioactivity found (>98% in plasma, >75% in liver) was bound to protein.
Label present in liver, plasma and kidney was in the range of 1-2% of total radioactivity administered per g or mL, changing little with time.
Other organs (brown and white adipose tissues, muscle, brain, cornea and retina) contained levels of label in the range of 1/12th to 1/10th of that of liver.
In all, the rats retained, 6 hours after administration, about 5% of the label, half of it in the liver.

The specific radioactivity of tissue protein, RNA and DNA was quite uniform.
The protein label was concentrated in amino acids, different from methionine, and largely coincident with the result of protein exposure to labeled formaldehyde.
DNA radioactivity was essentially in a single different adduct base, different from the normal bases present in DNA.
The nature of the tissue label accumulated was, thus, a direct consequence of formaldehyde binding to tissue structures.

The administration of labeled aspartame to a group of cirrhotic rats resulted in comparable label retention by tissue components, which suggests that liver function (or its defect) has little effect on formaldehyde formation from aspartame and binding to biological components.

The chronic treatment of a series of rats with 200 mg/kg of non-labeled

aspartame during 10 days results in the accumulation of even more label when given the radioactive bolus, suggesting that the amount of formaldehyde adducts coming from aspartame in tissue proteins and nucleic acids may be cumulative.

It is concluded that aspartame consumption may constitute a hazard because of its contribution to the formation of formaldehyde adducts. PMID: 9714421

[Extracts]
"The high label presence in plasma and liver is in agreement with the carriage of the label from the intestine to the liver via the portal vein.
The high label levels in kidney and, to a minor extent, in brown adipose tissue and brain are probably a consequence of their high blood flows (45).
Even in white adipose tissue, the levels of radioactivity found 6 hours after oral administration were 1/25th those of liver.
Cornea and retina, both tissues known to metabolize actively methanol (21,28) showed low levels of retained label.
In any case, the binding of methanol-derived carbon to tissue proteins was widespread, affecting all systems, fully reaching even sensitive targets such as the brain and retina....

The amount of label recovered in tissue components was quite high in all the groups, but especially in the NA rats.
In them, the liver alone retained, for a long time, more than 2 % of the methanol carbon given in a single oral dose of aspartame, and the rest of the body stored an additional 2 % or more.
These are indeed extremely high levels for adducts of formaldehyde, a substance responsible of chronic deleterious effects (33), that has also been considered carcinogenic (34,47).
The repeated occurrence of claims that aspartame produces headache and other neurological and psychological secondary effects-- more often than not challenged by careful analysis-- (5, 9, 10, 15, 48) may eventually find at least a partial explanation in the permanence of the formaldehyde label, since formaldehyde intoxication can induce similar effects (49).

The cumulative effects derived from the incorporation of label in the chronic administration model suggests that regular intake of aspartame may result in the progressive accumulation of formaldehyde adducts.
It may be further speculated that the formation of adducts can help to explain the chronic effects aspartame consumption may induce on sensitive tissues such as brain (6, 9, 19, 50).
In any case, the possible negative effects that the accumulation of formaldehyde adducts can induce is, obviously, long-term.
The alteration of protein integrity and function may needs some time to induce substantial effects.
The damage to nucleic acids, mainly to DNA, may eventually induce cell death and/or mutations.
The results presented suggest that the conversion of aspartame methanol into formaldehyde adducts in significant amounts in vivo should to be taken into account because of the widespread utilization of this sweetener.
Further epidemiological and long-term studies are needed to determine the

extent of the hazard that aspartame consumption poses for humans."

http://groups.yahoo.com/group/aspartameNM/message/864
Butchko, Tephly, McMartin: Alemany: aspartame formaldehyde adducts in rats: Murray 2002.09.08 rmforall
Prof. Alemany vigorously affirms the validity of the Trocho study against criticism:
Butchko, HH et al [24 authors], Aspartame: review of safety. Regul. Toxicol. Pharmacol. 2002 April 1; 35 (2 Pt 2): S1-93, review available for $35, [an industry paid organ]. Butchko:
"When all the research on aspartame, including evaluations in both the premarketing and postmarketing periods, is examined as a whole, it is clear that aspartame is safe, and there are no unresolved questions regarding its safety under conditions of intended use."
[They repeatedly pass on the ageless industry deceit that the methanol in fruits and vegetables is as as biochemically available as that in aspartame-- see the 1984 rebuttal by W.C. Monte.]
In the same report, Schiffman concludes on page S49, not citing any research after 1997, "Thus, the weight of the scientific evidence indicates that aspartame does not cause headache."
Dr. Susan S. Schiffman, Dept. of Psychiatry, Duke University
sss@acpub.duke.edu 919-684-3303, 660-5657

http://groups.yahoo.com/group/aspartameNM/message/911
RTP ties to industry criticized by CSPI: Murray: 2002.12.09 rmforall

http://groups.yahoo.com/group/aspartameNM/message/846
aspartame in Merck Maxalt-MLT worsens migraine,
AstraZeneca Zomig, Eli Lilly Zyprexa,
J&J Merck Pepcid AC (Famotidine 10mg) Chewable Tab,
Pfizer Cool Mint Listerine Pocketpaks: Murray 2002.07.16 rmforall

Migraine MLT-Down: an unusual presentation of migraine in patients with aspartame-triggered headaches.
Newman LC, Lipton RB Headache 2001 Oct; 41(9): 899-901.
[Merck 10-mg Maxalt-MLT, for migraine, has 3.75 mg aspartame, while 12 oz diet soda has 200 mg.]
Headache Institute, St. Lukes-Roosevelt Hospital Center, New York, NY
Department of Neurology newmanache@aol.com
Albert Einstein College of Medicine, Bronx, NY
Innovative Medical Research RLipton@aecom.yu.edu

http://groups.yahoo.com/group/aspartameNM/message/855
Blumenthall & Vance: aspartame chewing gum headaches Nov 1997: Murray 2002.07.28 rmforall

Harvey J. Blumenthal, MD, Dwight A Vance, RPh
Chewing Gum Headaches. Headache 1997 Nov-Dec; 37(10): 665-6.
Department of Neurology, University of Oklahoma College of Medicine, Tulsa, USA. neurotulsa@aol.com
Aspartame, a popular dietetic sweetener, may provoke headache in some

susceptible individuals. Herein, we describe three cases of young women with migraine who reported their headaches could be provoked by chewing gum sweetened with aspartame. [6-8 mg aspartame per stick chewing gum]

Subject: Re: Murray: Butchko:

Tephly: critique of Trocho report Apr 2002 8.29.2
Date: Fri, 30 Aug 2002 09:49:56 +0200
From: Marià Alemany alemany@bio.ub.es
To: Rich Murray rmforall@att.net
References: 1

Dear Rich,

Thank you for the opportunity to say something about the "paper" by Tephly that followed our study on the incorporation of aspartame-derived methanol label into DNA and protein of rats.
I don't know if responding to that publication is worth the effort.

Surprisingly, a serious journal, such as Life Sciences published a rebuttal of our previous paper as a normal "research paper", but including no new information neither experimental work.
This is only a sample of the "scientific" power of the advocates of aspartame.

Anybody can extract conclusions from this anomaly, but it seems to me that there was nothing new in that pamphlet that may add information to what we already explained in our paper.
The responses to the questions raised by Tephly are already in our paper, which means that either that it was not read or, worst, it was misread.

The presence of aspartame-derived label in DNA and protein adducts is unquestionable and unquestioned, and agrees with previous studies.
Then, what importance has the mechanism of incorporation?
There were adducts, and they represent loss of function and mutation.
That was our thesis.

The reference to previous studies showing very low levels of formaldehyde in blood do not refute our data.
First of all, measuring formaldehyde is tricky,
and in any case, the circulating levels would be below the current limit of detection for most of the methods used.
That is the current explanation for the low levels of methanol in plasma after aspartame loading: they are zero, using most of the methods available for methanol, since the expected levels are currently below the limit of detection...

In addition, it is not logical to expect to find measurable levels of formaldehyde in a medium (blood) containing a huge amount of protein.
Formaldehyde reacts immediately with proteins because it is highly reactive: that is the reason why we have found it in cell protein and DNA.

It is absurd to expect it to forfeit binding with cell proteins and go all the way into the bloodstream!
Remember that formaldehyde is used to preserve corpses precisely because it binds protein (including those of putrefactive bacteria) and prevents its degradation.

The "alternative" point expressed by Tephly, suggesting that aspartame methanol-label goes all the way into formic acid and the C1 pathway was thoroughly refuted by us, using experimental data.
There was no labelled methionine nor thymine in protein and DNA respectively in the rat protein we recovered from rats treated with aspartame.
This means--unequivocally-- that the label present in DNA and protein adducts was NOT incorporated into amino acids or nucleic acid bases.

The only explanation for our data was that the label was in the form of formaldehyde adducts.

If this explanation does not satisfy other scientists, they are free to repeat the experiment and show where we went wrong, or to probe and prove experimentally their hypotheses. Otherwise, our results stand unchecked and, consequently, should be deemed true.

I hope that this information will help any attentive reader understand why we have left for good this field of study.

Best regards.

Prof. Dr. Marià Alemany
Grup de Recerca Nitrogen-Obesitat
Departament de Nutrició i Bromatologia
Facultat de Biologia, Universitat de Barcelona
Av. Diagonal, 645; 08028 Barcelona Espanya/España/Spain
tel. +34 93 403 4606; fax: +34 93 403 7064; E-mail: alemany@bio.ub.es

Life Sci 1999; 65(13): PL157-60. [letter, usually not peer reviewed]
Comments on the purported generation of formaldehyde and adduct formation from the sweetener aspartame.

Tephly TR Thomas R. Tephly 319-335-7979 thomas-tephly@uiowa.edu ttephly@blue.weeg.uiowa.edu Department of Pharmacology
The University of Iowa, Iowa City 52242, USA.

A recent paper by Trocho et al. (1) describes experiments meant to show that formaldehyde adducts are formed when rats are administered the sweetener aspartame.
These authors assume that the methanol carbon of aspartame generates formaldehyde which then forms adducts with protein, DNA, and RNA.
Doses employed range widely.
In this letter, studies which have been published previously and which were not cited by these authors are reviewed in order to put into perspective the disposition of methanol and formaldehyde in monkeys and humans, species

relevant to the toxicity of methanol and its toxic metabolite, formic acid.
PMID: 10503962, UI: 99431287

[A number of pro-aspartame studies by Tephly and associates, invariably funded by the aspartame industry (Monsanto, NutraSweet) are criticized in detail at:

http://www.HolisticMed.com/aspartame mgold@holisticmed.com
Aspartame Toxicity Information Center Mark D. Gold
12 East Side Drive #2-18 Concord, NH 03301 603-225-2100
http://www.holisticmed.com/aspartame/abuse/methanol.html
"Scientific Abuse in Aspartame Research"

Gold points out that industry methanol assays were too insensitive to properly measure blood methanol levels.]

http://groups.yahoo.com/group/aspartameNM/message/1016
President Bush & formaldehyde (aspartame) toxicity: Ramazzini Foundation carcinogenicity results Dec 2002: Soffritti: Murray 2003.08.03 rmforall

p. 88 "The sweetening agent aspartame hydrolyzes in the gastrointestinal tract to become free methyl alcohol, which is metabolized in the liver to formaldehyde, formic acid, and CO2. (11)"
Medinsky MA & Dorman DC. 1994; Assessing risks of low-level methanol exposure. CIIT Act. 14: 1-7.

Ann N Y Acad Sci. 2002 Dec; 982: 87-105.
Results of long-term experimental studies on the carcinogenicity of formaldehyde and acetaldehyde in rats.
Soffritti M, Belpoggi F, Lambertin L, Lauriola M, Padovani M, Maltoni C.
Cancer Research Center, European Ramazzini Foundation for Oncology and Environmental Sciences, Bologna, Italy. crcfr@tin.it

Formaldehyde was administered for 104 weeks in drinking water supplied ad libitum at concentrations of 1500, 1000, 500, 100, 50, 10, or 0 mg/L to groups of 50 male and 50 female Sprague-Dawley rats beginning at seven weeks of age.
Control animals (100 males and 100 females) received tap water only.
Acetaldehyde was administered to 50 male and 50 female Sprague-Dawley rats beginning at six weeks of age at concentrations of 2,500, 1,500, 500, 250, 50, or 0 mg/L.
Animals were kept under observation until spontaneous death.
Formaldehyde and acetaldehyde were found to produce an increase in total malignant tumors in the treated groups and showed specific carcinogenic effects on various organs and tissues. PMID: 12562630

Ann N Y Acad Sci. 2002 Dec; 982: 46-69.

Results of long-term experimental studies on the carcinogenicity of methyl alcohol and ethyl alcohol in rats.
Soffritti M, Belpoggi F, Cevolani D, Guarino M, Padovani M, Maltoni C.

Cancer Research Center, European Ramazzini Foundation for Oncology and Environmental Sciences, Bologna, Italy. crcfr@tin.it

Methyl alcohol was administered in drinking water supplied ad libitum at doses of 20,000, 5,000, 500, or 0 ppm to groups of male and female Sprague-Dawley rats 8 weeks old at the start of the experiment.
Animals were kept under observation until spontaneous death.
Ethyl alcohol was administered by ingestion in drinking water at a concentration of 10% or 0% supplied ad libitum to groups of male and female Sprague-Dawley rats; breeders and offspring were included in the experiment.
Treatment started at 39 weeks of age (breeders), 7 days before mating, or from embryo life (offspring) and lasted until their spontaneous death.
Under tested experimental conditions, methyl alcohol and ethyl alcohol were demonstrated to be carcinogenic for various organs and tissues.
They must also be considered multipotential carcinogenic agents.
In addition to causing other tumors, ethyl alcohol induced malignant tumors of the oral cavity, tongue, and lips.
These sites have been shown to be target organs in man by epidemiologic studies. Publication Types: Review Review, Tutorial PMID: 12562628

Surely the authors deliberately emphasized that aspartame is well-known to be a source of formaldehyde, which is an extremely potent, cumulative toxin, with complex, multiple effects on all tissues and organs.

This is even more significant, considering that they have already tested aspartame, but not yet released the results:

p. 29-32 Table 1: The Ramazzinni Foundation Cancer Program
Project of [200] Long-Term Carcinogenicity Bioassays: Agents Studied

No. No. of Bioassays Species No. Route of Exposure
108. "Coca-Cola" 4 Rat 1,999 Ingestion, Transplantal Route

109. "Pepsi-Cola" 1 Rat 400 Ingestion
110. Sucrose 1 Rat 400 Ingestion
111. Caffeine 1 Rat 800 Ingestion
112. Aspartame 1 Rat 1,800 Ingestion

http://members.nyas.org/events/conference/conf_02_0429.html
Soffritti said that Coca-Cola showed no carcinogenicity.

It may be time to disclose these important aspartame results.

Finally, an intripid and much published team in Japan has found DNA damage in 8 tissues from single non-lethal doses of aspartame (near-significant high levels of DNA damage in 5 tissues) and many other additives in groups of just 4 mice:

Mutat Res 2002 Aug 26; 519(1-2): 103-19
The comet assay with 8 mouse organs: results with 39 currently used food

additives.
Sasaki YF, Kawaguchi S, Kamaya A, Ohshita M, Kabasawa K, Iwama K, Taniguchi K, Tsuda S.
Laboratory of Genotoxicity, Faculty of Chemical and Biological Engineering, Hachinohe National College of Technology, Tamonoki Uwanotai 16-1, Aomori 039-1192, Japan.
yfsasaki-c@hachinohe-ct.ac.jp ; s.tsuda@iwate-u.ac.jp

We determined the genotoxicity of 39 chemicals currently in use as food additives.
They fell into six categories-dyes, color fixatives and preservatives, preservatives, antioxidants, fungicides, and sweeteners.

We tested groups of four male ddY mice once orally with each additive at up to 0.5xLD(50) or the limit dose (2000 mg/kg) and performed the comet assay on the glandular stomach, colon, liver, kidney, urinary bladder, lung, brain, and bone marrow 3 and 24 h after treatment.

Of all the additives, dyes were the most genotoxic.
Amaranth, Allura Red, New Coccine, Tartrazine, Erythrosine, Phloxine, and Rose Bengal induced dose-related DNA damage in the glandular stomach, colon, and/or urinary bladder.
All seven dyes induced DNA damage in the gastrointestinal organs at a low dose (10 or 100 mg/kg).

Among them, Amaranth, Allura Red, New Coccine, and Tartrazine induced DNA damage in the colon at close to the acceptable daily intakes (ADIs).

Two antioxidants (butylated hydroxyanisole (BHA) and butylated hydroxytoluene (BHT)), three fungicides (biphenyl, sodium o-phenylphenol, and thiabendazole), and four sweeteners (sodium cyclamate, saccharin, sodium saccharin, and sucralose) also induced DNA damage in gastrointestinal organs.

Based on these results, we believe that more extensive assessment of food additives in current use is warranted. PMID: 12160896

http://groups.yahoo.com/group/aspartameNM/message/934
24 recent formaldehyde toxicity [Comet assay] reports:
Murray 2002.12.31 rmforall

http://groups.yahoo.com/group/aspartameNM/message/935
Comet assay finds DNA damage from sucralose, cyclamate, saccharin in mice: Sasaki YF & Tsuda S Aug 2002: Murray 2003.01.01 rmforall
[Also borderline evidence, in this pilot study of 39 food additives, using test groups of 4 mice, for DNA damage from for stomach, colon, liver, bladder, and lung 3 hr after oral dose of 2000 mg/kg aspartame--a very high dose. Methanol is the only component of aspartame that can lead to DNA damage.]

http://groups.yahoo.com/group/aspartameNM/message/961

genotoxins, Comet assay in mice: Ace-K, stevia fine; aspartame poor; sucralose, cyclamate, saccharin bad: Y.F. Sasaki Aug 2002: Murray 2003.01.27 rmforall [A detailed look at the data]]

http://groups.yahoo.com/group/aspartameNM/message/1018
aspartame toxicity coverup increases danger of corporate meltdown: Michael C. Carakostas of Coca-Cola: Murray 2003.08.11 rmforall

http://groups.yahoo.com/group/aspartameNM/message/857
www.dorway.com: original documents and long reviews of flaws in aspartame toxicity research: Murray 2002.07.31 rmforall

http://groups.yahoo.com/group/aspartameNM/message/858
Samuels: Strong: Roberts: Gold: flaws in double-blind studies re aspartame and MSG toxicity: Murray 2002.08.01 rmforall

"Survey of aspartame studies: correlation of outcome and funding sources," 1998, unpublished: http://www.dorway.com/peerrev.html
Walton found 166 separate published studies in the peer reviewed medical literature, which had relevance for questions of human safety. The 74 studies funded by industry all (100%) attested to aspartame's safety, whereas of the 92 non-industry funded studies, 84 (91%) identified a problem. Six of the seven non-industry funded studies that were favorable to aspartame safety were from the FDA, which has a public record that shows a strong pro-industry bias.
Ralph G. Walton, MD, Prof. of Clinical Psychology, Northeastern Ohio Universities, College of Medicine, Dept. of Psychiatry, Youngstown, OH 44501, Chairman, The Center for Behavioral Medicine, Northside Medical Center, 500 Gypsy Lane, P.O. Box 240 Youngstown, OH 44501 330-740-3621 rwalton193@aol.com
http://www.neoucom.edu/DEPTS/Psychiatry/walton.htm

http://groups.yahoo.com/group/aspartameNM/message/622
Gold: Koehler: Walton: Van Den Eeden: Leon:
aspartame toxicity: Murray 2001.06.04 rmforall four double-blind studies

Headache 1988 Feb; 28(1): 10-4
The effect of aspartame on migraine headache.
Koehler SM, Glaros A PMID: 3277925, UI: 88138777
Shirley M. Koehler, Ph.D. Department of Psychology
Brooks Rehabilitation Hospital
3599 University Boulevard, South Jacksonville, Florida 32216
(904) 858-7650 shirley.koehler@brookshealth.org
Alan Glaros glarosa@umkc.edu 816-235-2074

They conducted a double-blind study of patients, ages 18-55, who had a medical diagnosis of classical migraines (normally having 1-3 migraines in 4-weeks), who were not on medications (other than analgesics), and who suspected that aspartame had a negative effect on their migraine headaches. The subjects were given 1200 mg daily,

aspartame or placebo, for four weeks, about 17 mg/kg. The placebo group had no increase in headaches. Approximately half of the subjects (5 of 11) who took aspartame had a large, statistically significant ($p = 0.02$), increase in migraine headache frequency, but not in intensity or duration, compared to baseline or placebo. Only 11 of 25 subjects completed the program: 8 dropped out, 4 began new medications, 2 had incomplete records. They were at home. Since 1/3 of the subjects dropped out, they may have been choosing to avoid headaches-- were they unpaid? To achieve statistical signifance with only 11 subjects hints that the incidence rate from aspartame is very high, about 1/2, for migraine cases who believe that they are hurt by aspartame.

http://groups.yahoo.com/group/aspartameNM/message/1077
eight depressed people react strongly to aspartame, Prof. Ralph G. Walton, MD, 1993 double-blind study, full text: Murray 2004.04.26 rmforall

Walton, RG, "Adverse reactions to aspartame: double-blind challenge in patients from a vulnerable population," 1993, with Robert Hudak and Ruth J. Green-Waite, Biological Psychiatry, 34 (1), 13-17.
Ralph G. Walton, MD, Prof. of Clinical Psychology, Northeastern Ohio Universities, College of Medicine, Dept. of Psychiatry, Youngstown, OH 44501, Chairman, The Center for Behavioral Medicine, Northside Medical Center, 500 Gypsy Lane, P.O. Box 240 Youngstown, OH 44501 330-740-3621 rwalton193@aol.com
http://www.neoucom.edu/DEPTS/Psychiatry/walton.htm

Eight depressed patients, ages 24-60, and five non-depressed controls, ages 24-56, employed at the hospital, were given for 7 days either aspartame or a placebo, and then after a 3 day break, given the opposite. Each got 2100 mg aspartame daily, 30 mg/kg bodyweight, equal to 10-12 cans of diet soda daily, about a gallon. Despite the very small number of subjects, the results were dramatic and statistically significant. The eight depressed patients reported with aspartame, compared to placebo, much higher levels of nervousness, trouble remembering, nausea, depression, temper, and malaise. (For each symptom, $p<0.01$) The five normals did not report strong enough differences between aspartame and placebo to be significant. Initially, the study was to be on a group of 40, but was halted by the Institutional Review Board because of severe reactions among 3 of the depressed patients.

Again, statistical significance with only 8 depressed patients: "In this study, patients most often began to report significant symptoms after day 2 or 3." The incidence rate is very high, indeed, about 1/3. The most common symptoms are entirely typical of thousands of case histories.

Stephen K. Van Den Eeden, T.D. Koepsell, W.T. Longstreth, Jr, G. van Belle, J.R. Daling, B. McKnight, "Aspartame ingestion and headaches: a randomized crossover trial," 1994, Neurology, 44, 1787-93

Steven K. Van Den Eeden,PhD 550-450-2202 skv@dor.kaiser.org
Division of Research, Kaiser Permanente Medical Care Program
3505 Broadway, Oakland, CA 94611-5714
http://www.dor.kaiser.org/dorhtml/investigators/Stephen_Van_Den_Eeden.html

In their introduction, they comment:

"In addition, the FDA had received over 5,000 complaints as of July, 1991 in a passive surveillance system to monitor adverse side effects. (17) Neurologic problems constitute the primary complaints in these and several other case series, with headaches accounting for 18 to 45 %,depending on the case series reported. (17-19)"

Subjects, ages 18-57, were recruited who believed they got headaches from aspartame, but were otherwise mentally and physically healthy. They were paid $ 15 total, and were at home. Of the 44 subjects, 32 contributed data to the 38-day trials: a week of inert placebo, a week of either aspartame or placebo, followed by a week of the opposite, and then this two-week cycle repeated. The daily dose was about 30 mg/kg. "The proportion of days subjects reported having a headache was higher during aspartame treatment compared with placebo treatment (aspartame = 0.33, placebo = 0.24; p = 0.04) (table 5)".
Of the 12 subjects not included in the data, 7 reported adverse symptoms before withdrawing.

Again, statistical significance with a moderate number of healthy subjects, willing to be recruited by a newspaper ad, who believed aspartame hurt them. The number of headaches for each subject for each treatment week are given: it appears that 4 subjects had the strongest increase in headaches from the run-in week or placebo week to their first week on aspartame, jumping from 0 to 5, 1 to 6, 1 to 4, 0 to 5 headaches per week. So, about 4 of the 44 healthy people recruited for the study, who believed aspartame hurt them, had a stong increase in headaches from the first week of daily asparame exposure, while 7 reported adverse symptoms before leaving, a total of 11 out of 44, an incidence ratio of 1/4.

This is sky high, if we consider that, if the incidence ratio for the about two hundred million users in the USA is 1 of 100, that is 2 million cases. It is plausible that the incidence ratio lies between 1 and 10 out of 100 for continuous daily exposure. These three flames should have set off alarm bells, with extensive follow-up studies and much more careful study of thousands of case histories. But these little flares were adroitly smothered by thick blankets of industry funded fluff:

http://groups.yahoo.com/group/aspartameNM/message/623
Simmons: Gold: Schiffman: Spiers:
aspartame toxicity: Murray 2001.06.04 rmforall two double-blind studies

http://www.dorway.com/tldaddic.html 5-page review

Roberts HJ Aspartame (NutraSweet) addiction.
Townsend Letter 2000 Jan; HJRobertsMD@aol.com
http://www.sunsentpress.com/ sunsentpress@aol.com
Sunshine Sentinel Press P.O.Box 17799 West Palm Beach, FL 33416
800-814-9800 561-588-7628 561-547-8008 fax

http://groups.yahoo.com/group/aspartameNM/message/669
1038-page medical text "Aspartame Disease: An Ignored Epidemic"
published May 30 2001 $ 60.00 postpaid data from 1200 cases
available at http://www.amazon.com
over 600 references from standard medical research

http://groups.yahoo.com/group/aspartameNM/message/790
Moseley: review Roberts "Aspartame Disease: An Ignored Epidemic":
Murray 2002.02.07 rmforall

Roberts, Hyman J., 1924- ,
Useful insights for diagnosis, treatment and public heath: an updated
anthology of original research, 2002, 798 pages,
aspartame disease, pages 627-685, 778-780

http://groups.yahoo.com/group/aspartameNM/message/859
Roberts: the life work of a brilliant clinician: aspartame toxicity:
Murray 2002.08.02 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1070
critique of aspartame review, French Food Safety Agency AFSSA 2002.05.07
aspartamgb.pdf (18 pages, in English), Martin Hirsch:
Murray 2004.04.13

http://groups.yahoo.com/group/aspartameNM/message/957
safety of aspartame Part 1/2 12.4.2: EC HCPD-G SCF:
Murray 2003.01.12 rmforall EU Scientific Committee on Food, a whitewash

http://groups.yahoo.com/group/aspartameNM/message/1045
http://www.holisticmed.com/aspartame/scf2002-response.htm
Mark Gold exhaustively critiques European Commission Scientific
Committee on Food re aspartame (2002.12.04): 59 pages, 230 references

http://groups.yahoo.com/group/aspartameNM/message/989 On 2003.04.10
the European Union Parliament voted 440 to 20 to approve sucralose,
limit cyclamates & reevaluate aspartame & stevia: Murray 2003.04.12 rmforall
There is an astonishing amount of positive research about stevia, banned in
the EU, and not allowed to be claimed as a sweetener in the USA:

http://www.eatright.org/Nutritive(1).pdf
J Am Diet Assoc. 2004 Feb; 104(2): 255-75.
Position of the American Dietetic Association: use of nutritive and
nonnutritive sweeteners. American Dietetic Association.

http://groups.yahoo.com/group/aspartameNM/message/1068

critique of aspartame review by American Dietetic Association Feb 2004,
Valerie B. Duffy & Madeleine J. Sigman-Grant: Murray 2004.05.14 rmforall

http://www.dorway.com (David O. Rietz, died 2003) over 12,000 print
pages Mission-Possible-USA Betty Martini 770-242-2599
Bettym19@mindspring.com http://www.dorway.com/asprlink.html many links
http://www.dorway.com/nslawsuit.txt Jeff Martin, Attorney
http://www.dorway.com/doctors.txt
What many informed doctors are saying/have said about aspartame

Mary Nash Stoddard
Toxicology Sourcebook: "Deadly Deception Story of Aspartame"
Aspartame Consumer Safety Network and Pilot Hotline [since 1987]
PO Box 780634 Dallas TX 75378-0634
phone: 214.387.4001 marystod@airmail.net http://www.aspartamesafety.com

http://www.sweetpoison.com/
http://www.sweetpoison.com/food-additives-to-avoid.html
Dr. Janet Starr Hull, PhD, CN jshull@sweetpoison.com

http://groups.yahoo.com/group/aspartameNM/message/805
Ive: UK Daily Mirror Magazine: aspartame toxicity:
Murray 2002.02.18 rmforall

http://www.dorway.com/upipart1.txt
http://groups.yahoo.com/group/aspartameNM/message/262
aspartame expose 96K Oct 1987 Part 1/3: Gregory Gordon, UPI reporter:
Murray 2000.07.10 rmforall

http://www.dorway.com/enclosur.html
http://groups.yahoo.com/group/aspartameNM/message/53
aspartame history Part 1/4 1964-1976: Gold: Murray 1999.11.06 rmforall

http://groups.yahoo.com/group/aspartameNM/message/928
revolving door, Monsanto, FDA, EPA: NGIN: Murray 2002.12.23 rmforall

http://groups.yahoo.com/group/aspartameNM/message/841
RTM: Merisant Co., MSD Capital, Dell Computer Corp., NutraSweet Co.,
JW Childs Assc.: aspartame-neotame toxicity 2002.07.10 rmforall

http://groups.yahoo.com/group/aspartameNM/message/876
hyperthyroidism (Graves disease) in George and Barbara Bush, 1991--
aspartame toxicity? Roberts 1997: Murray 2002.10.09 rmforall

http://groups.yahoo.com/group/aspartameNM/message/874
re "dry drunk": Bisbort: danger to President Bush from aspartame toxicity:
Murray: 2002.02.24 2002.09.29 rmforall

http://groups.yahoo.com/group/aspartameNM/message/1065
politicians and celebrities hooked on diet sodas (aspartame):
Murray 2004.03.24 rmforall

http://google.com gives 247,000 websites for "aspartame" , with the top 8 of 10 listings being anti-aspartame, while
http://groups.google.com finds on 700 MB of posts from 20 years of Usenet groups, 92,300 posts, the top 10 being anti-aspartame.
http://news.google.com 33 recent aspartame items from 4500 sources.
http://www.AllTheWeb.com gives 43,913, the top 8 of 10 anti.
http://teoma.com/index.asp gives 78,200 websites, top 8 of 10 anti.
http://www.ncbi.nlm.nih.gov/PubMed lists 762 aspartame items.

Many scientific studies and case histories report: * headaches * many body and joint pains (or burning, tingling, tremors, twitching, spasms, cramps, stiffness, numbness, difficulty swallowing) * fever, fatigue, swollen glands * "mind fog", "feel unreal", poor memory, confusion, anxiety, irritability, depression, mania, insomnia, dizziness, slurred speech, sexual problems, poor vision, hearing (deafness, tinnitus), or taste * red face, itching, rashes, allergic dermatitis, hair loss, burning eyes or throat, dry eyes or mouth, mouth sores, burning tongue * obesity, bloating, edema, anorexia, poor appetite or excessive hunger or thirst * breathing problems, shortness of breath * nausea, diarrhea or constipation * coldness * sweating * racing heart, low or high blood pressure, erratic blood sugar levels * hypothryroidism or hyperthyroidism * seizures * birth defects * brain cancers * addiction * aggrivates diabetes, autism, allergies, lupus, ADHD, fibromyalgia, chronic fatigue syndrome, multiple chemical sensitivity, multiple sclerosis, pseudotumor cerebri and interstitial cystitis (bladder pain).

http://groups.yahoo.com/group/aspartameNM/message/870
Aspartame: Methanol and the Public Interest 1984: Monte: Murray 2002.09.23 rmforall

Dr. Woodrow C. Monte Aspartame: methanol, and the public health. Journal of Applied Nutrition 1984; 36 (1): 42-54.
(62 references) Professsor of Food Science [retired 1992]
Arizona State University, Tempe, Arizona 85287 woodymonte@xtra.co.nz
The methanol from 2 L of diet soda, 5.6 12-oz cans, 20 mg/can, is 112 mg, 10% of the aspartame.
The EPA limit for water is 7.8 mg daily for methanol (wood alcohol), a deadly cumulative poison.
Many users drink 1-2 L daily.
The reported symptoms are entirely consistent with chronic methanol toxicity. (Fresh orange juice has 34 mg/L, but, like all juices, has 16 times more ethanol, which strongly protects against methanol.)

"The greater toxicity of methanol to man is deeply rooted in the limited biochemical pathways available to humans for detoxification.
The loss of uricase (EC 1.7.3.3.),
formyl-tetrahydrofolate synthetase (EC 6.3.4.3.) (42)
and other enzymes (18) during evolution sets man apart from all laboratory animals including the monkey (42).

There is no generally accepted animal model for methanol toxicity (42, 59).

Humans suffer "toxic syndrome" (54) at a minimum lethal dose
of <1 gm/kg, much less than that of monkeys, 3-6 g/kg (42, 59).

The minimum lethal dose of methanol
in the rat, rabbit, and dog is 9.5, 7.0 , and 8.0 g/kg, respectively (43);
ethyl alcohol is more toxic than methanol to these test animals (43)."

"Fruit and vegetables contain pectin with variable methyl ester content.
However, the human has no digestive enzymes for pectin (6, 25) particularly
the pectin esterase required for its hydrolysis to methanol (26).

Fermentation in the gut may cause disappearance of pectin (6) but the
production of free methanol is not guaranteed by fermentation (3).
In fact, bacteria in the colon probably reduce methanol directly to formic
acid or carbon dioxide (6) (aspartame is completely absorbed before
reaching the colon).
Heating of pectins has been shown to cause virtually no demethoxylation;
even temperatures of 120 deg C produced only traces of methanol (3).
Methanol evolved during cooking of high pectin foods (7) has been accounted
for in the volatile fraction during boiling and is quickly lost to the
atmosphere (49).
Entrapment of these volatiles probably accounts for the elevation in
methanol levels of certain fruits and vegetable products during canning (31,
33)."

Recent research [see links at end of post] supports his focus on the
methanol to formaldehyde toxic process:

"The United States Environmental Protection Agency in their Multimedia
Environmental Goals for Environmental Assessment recommends a minimum
acute toxicity concentration of methanol in drinking water at 3.9 parts
per million, with a recommended limit of consumption below 7.8 mg/day (8).
This report clearly indicates that methanol:

"...is considered a cumulative poison due to the low rate of excretion
once it is absorbed. In the body, methanol is oxidized to formaldehyde
and formic acid; both of these metabolites are toxic." (8)...

Recently the toxic role of formaldehyde (in methanol toxicity) has been
questioned (34).
No skeptic can overlook the fact that, metabolically, formaldehyde must be
formed as an intermediate to formic acid production (54).

Formaldehyde has a high reactivity which may be why it has not been found in
humans or other primates during methanol poisoning (59)....

If formaldehyde is produced from methanol and does have a reasonable half
life within certain cells in the poisoned organism the chronic toxicological

ramifications could be grave.

Formaldehyde is a known carcinogen (57) producing squanous-cell carcinomas by inhalation exposure in experimental animals (22).
The available epidemiological studies do not provide adequate data for assessing the carcinogenicity of formaldehyde in man (22, 24, 57).

However, reaction of formaldehyde with deoxyribonucleic acid (DNA) has resulted in irreversible denaturation that could interfere with DNA replication and result in mutation (37)..."

http://www.dorway.com/barua.html
Dr. J. Barua (ophthalmic surgeon), Dr. Arun Bal (surgeon)
Emerging facts about aspartame.
Journal Of The Diabetic Association Of India 1995; 35 (4):
(79 references) barua@giasbm01.vsnl.net.in
"...the total amount of methanol absorbed will be approximately 10% of aspartame ingested. An EPA assessment of methanol states that methanol, 'is considered a cumulative poison due to the low rate of excretion once it is absorbed. The absorbed methanol is then slowly converted to formaldehyde...'"
"Reaction of formaldehyde with DNA has been observed, by spectrophotometry and electron microscopy, to result in irreversible denaturation."
"DKP [from aspartame] has been implicated in the occurence of brain tumors."

http://groups.yahoo.com/group/aspartameNM/message/939
aspartame (aspartic acid, phenylalanine) binding to DNA:
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Karikas GA, Schulpis KH, Reclos GJ, Kokotos G
Measurement of molecular interaction of aspartame and its metabolites with DNA. Clin Biochem 1998 Jul; 31(5): 405-7.
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http://www.chem.uoa.gr gkokotos@atlas.uoa.gr
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http://groups.yahoo.com/group/aspartameNM/message/960
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aspartame harms mice brain cells: Hetle & Eltervaag: 2001 thesis
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http://groups.yahoo.com/group/aspartameNM/message/346
WebMD: Barclay: Barth:
survey shows aspartame hurts memory in students 2000.11.09
Timothy M. Barth Department of Psychology t.barth@tcu.edu
Texas Christian University

Adrienne Samuels PhD tells how toxic MSG, like aspartame, is promoted by vested interests and hidden with 52 names, in brief TV interview Saturday Jan 25 2014, detailed website and book: Rich Murray 2014.01.19
http://rmforall.blogspot.com/2014/01/adrienne-samuels-phd-tells-how-toxic.html